Advanced Crew Served Weapons (ACSW)

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Agenda

- ACSW Team
- What is ACSW?
- ACSW New Capabilities
- ATD Exit Criteria
- SDD Program Overview
- ACSW in Combat Scenarios
- Summary

ACSW Team

What is ACSW?

ACSW Program Started in 1994

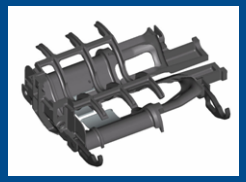
- Lightweight, Crew Portable Weapon System
- 25mm Family of Ammunition
- 250 SPM
- Full Ballistic Solution
- Programmable Ammunition with Muzzle Velocity Correctio
- TA/FCS Laser Range Finder & Target Tracking

ACSW Family: XM307, XM307K50 (XM312)

- .50 cal variant of the ACSW
- Part interchangeability with XM307, only 5 parts are different
- First demonstrated January 7, 2003
- Performance & physical characteristics exceed other crew-type .50 cal weapons
- Development of XM307K50 (XM312) will accelerate ACSW maturity
- Fires standard .50 cal ammunition with M15A2 links

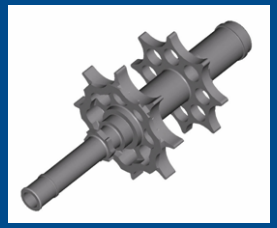
Convertible

- 5 piece conversion kit:
  - Cartridge guide & unload guide



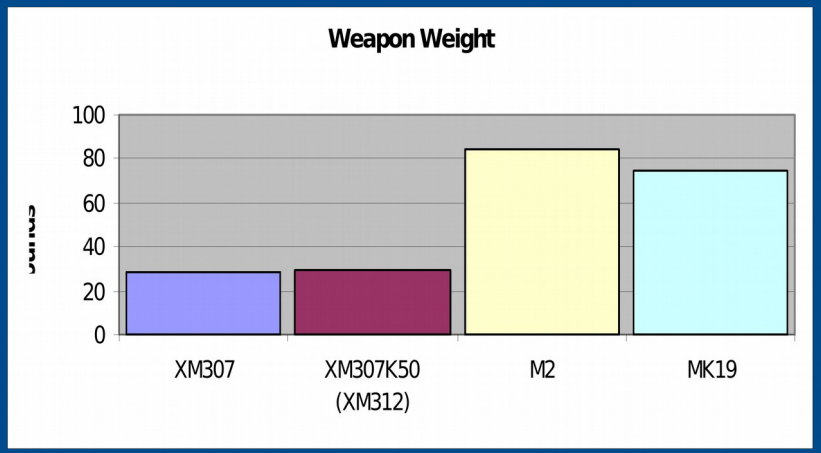
  - Bolt

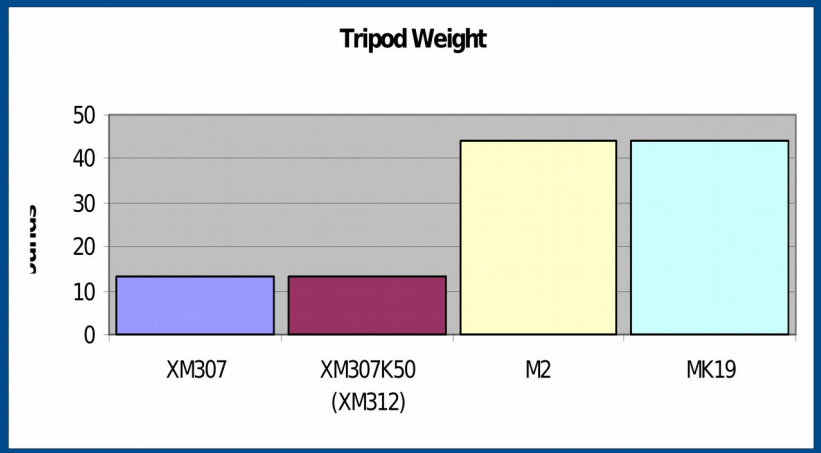
  - Sprocket

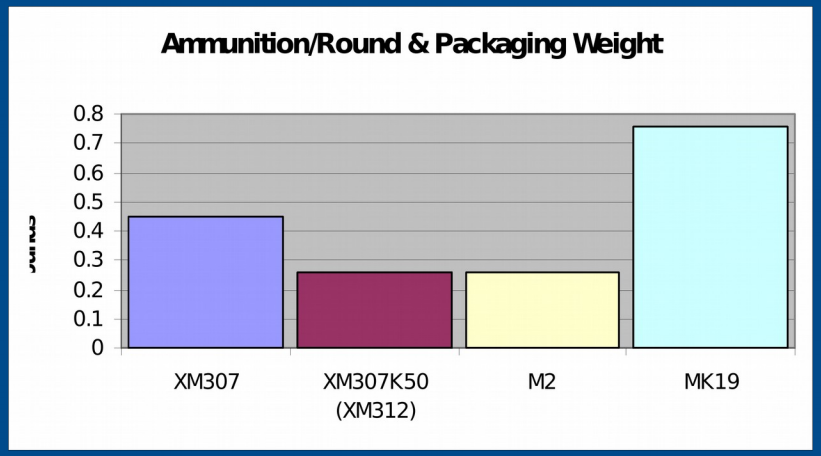


  - Barrel

Lightweight



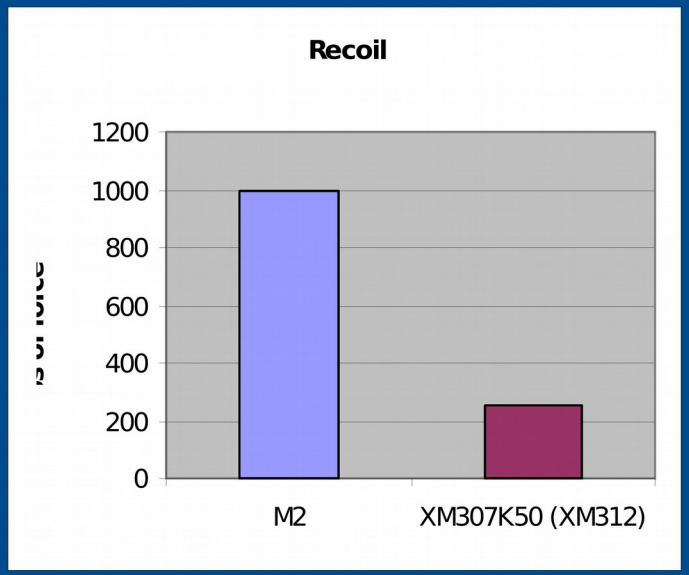




Easy to Transport

Low Recoil

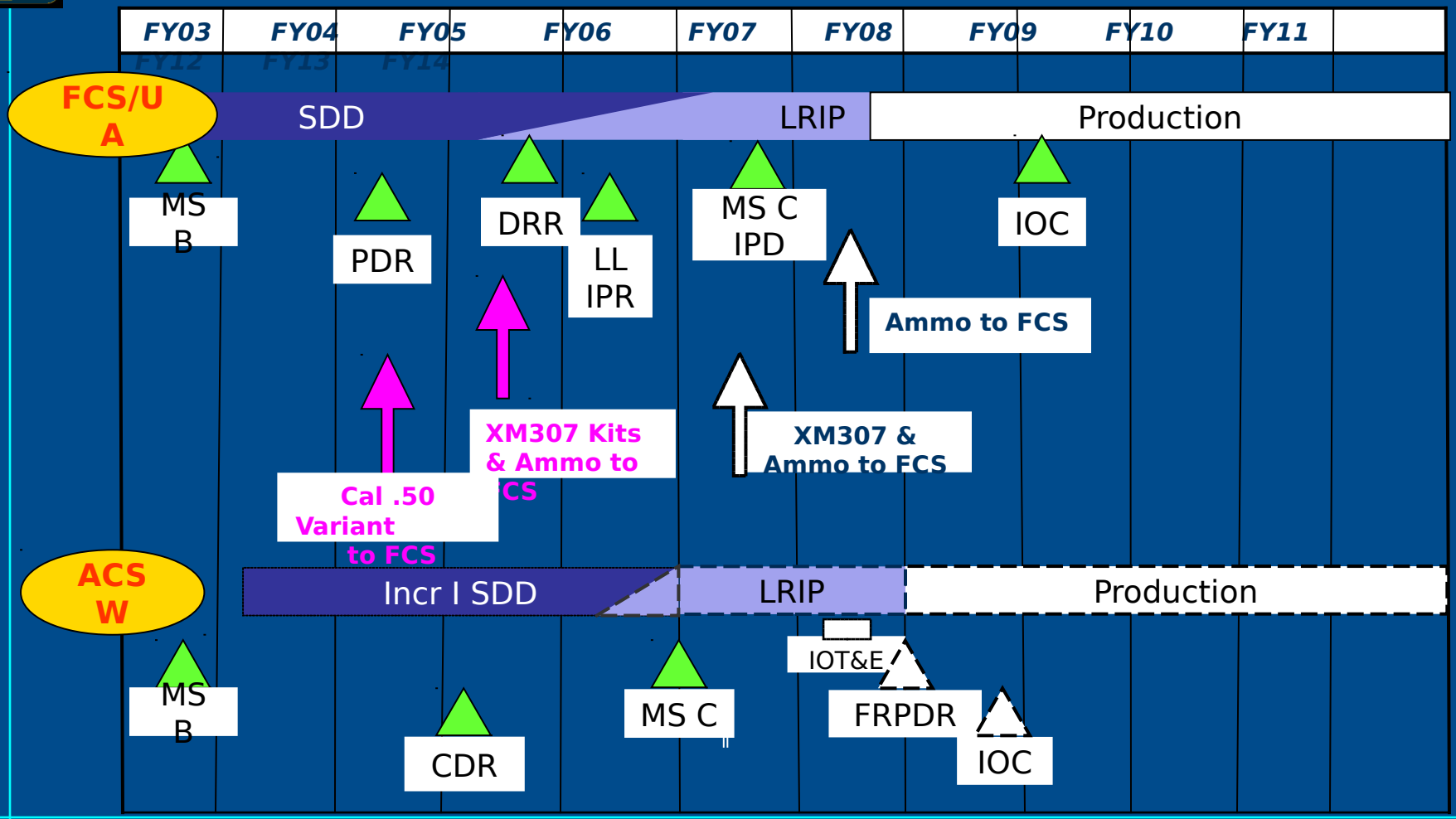
- Significant increase in accuracy
- Low burden on any moun
- Reduced wear on weapor components



ACSW ATD Exit Criteria

	Threshold	Goal	April 2003	
Lightweight				
System Weight (no ammunition)	57.0 lbs	38.6 lbs	48.4 lbs	✓
Crew (2 man) Portable Module (Transport Module Weight w/ ammo)	38.0 lbs/ person	35.0 lbs/ person	36.0 lbs/ person	✓
Lethality				
Accuracy/Dispersion	2.0 mils	0.5 mils	1.54 mils at 600 m	✓
Fuze Function set by Fire Control	Single Shot	Full Auto	3 & 5 rds	✓
Armor Penetration (at 0 degrees obliquity)	2” RHA @ 1,000 m	2” HHA @ 2,000 m	Yes	✓
Air Burst Point Range Error (mean) (known range, 600m)	+/- 5 m	+/- 2 m	+2.0 m	✓
P(h) given a burst, Lt Vehicle Target @ 1,000 meters	0.35	0.75	1.00	✓

FCS/UA & ACSW Program Schedule



The SDD Program

- Develop, test and deliver weapons systems
  - XM307K50 (XM312) .50 caliber weapon
  - XM307 25mm weapon
  - Remote operation kits
  - Dual feed modules
  - Pintles and vehicle adaptors
  - Tripods
  - Modular target acquisition/fire control simulator
- Increase weapon reliability

The SDD Program

- Develop and deliver ammunition rounds
  - TP
  - TP-S
  - HEAB
  - AP (Development and early prototype delivery to FCS/UA)
- Develop, integrate, test and deliver Integrated Logistics Support products
  - Operation manuals
  - Maintenance manuals

Driving towards Low Rate Initial Production

Unit of Action
Common Close Support Weapons

Potential UA Applications

60 MCS**

24 NLOS-M**

18 NLOS-C**

49 C2V*

10 RMV* (Unfunded)

30 R&SV*

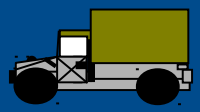
18 ARV-A(L)**

* - XM307 Primary Armament

** - XM307 Secondary Armament

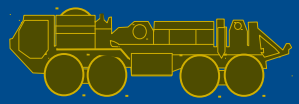
98 HMMWV (C2)

11 HMMWV (CMT)



89 HMMWV (SPT)

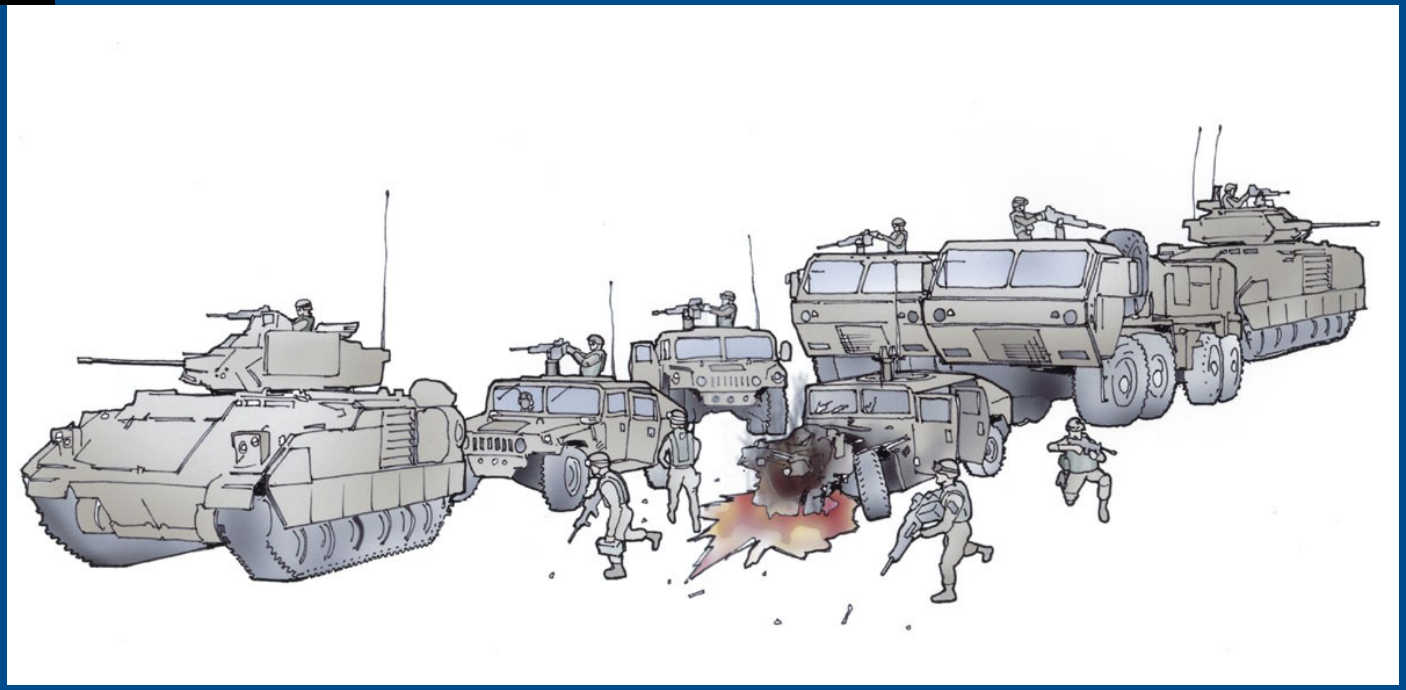
62 HEMTT Fueler



13 HEMTT Wrecker

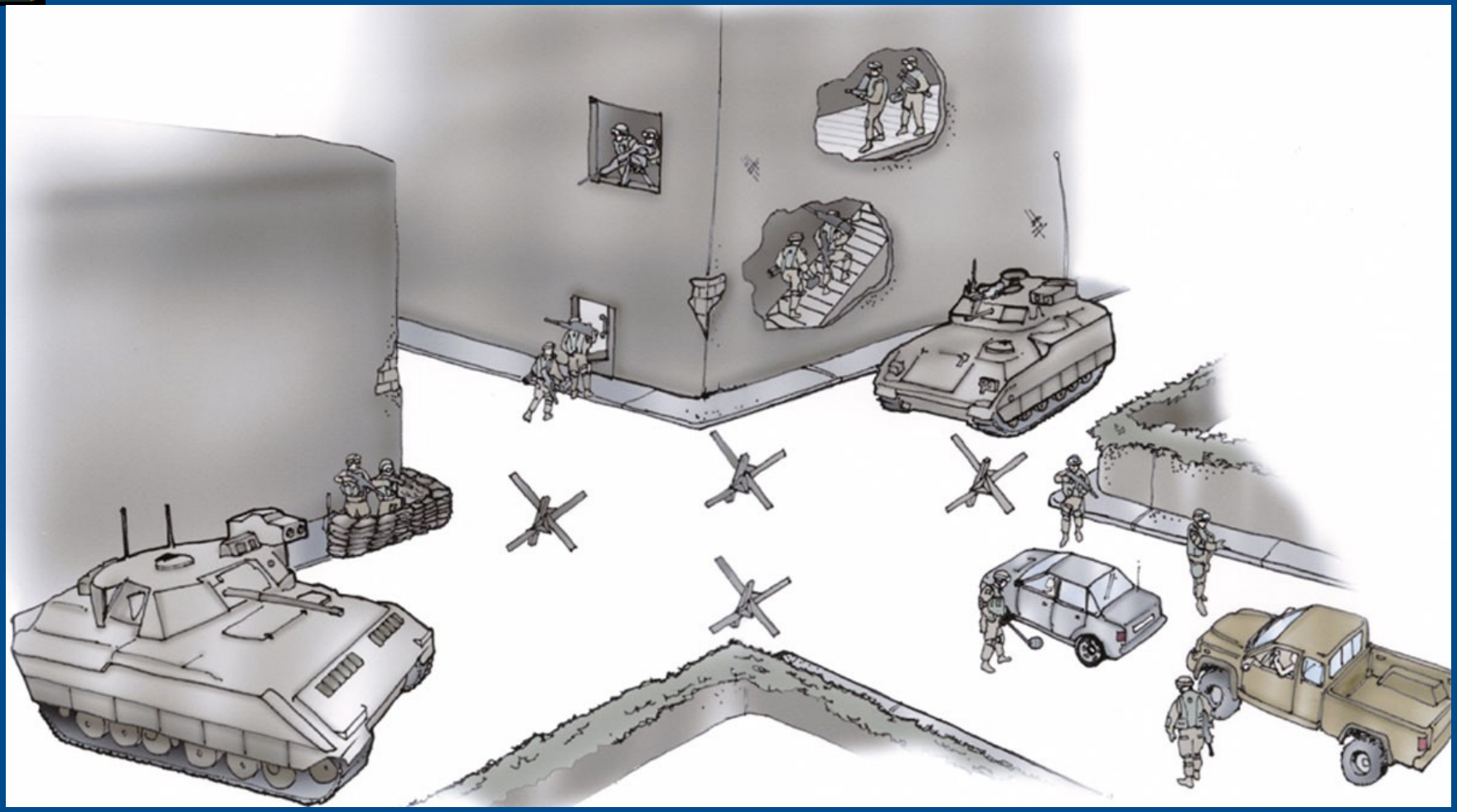
153 HEMTT-LHS

Recovery from Disabled Vehicle

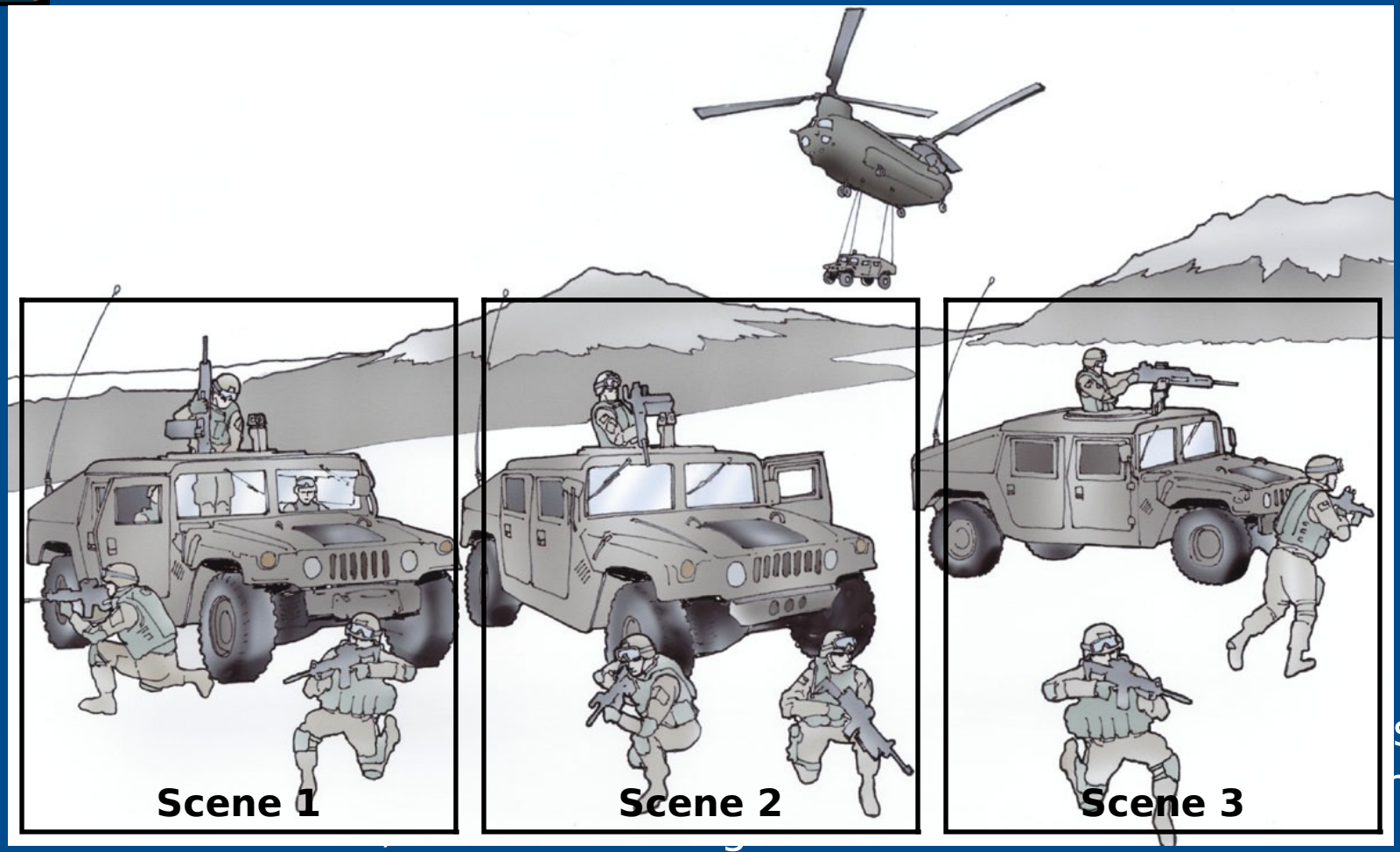


- Lightweight capability enables the gunner to remove the weapons system from the destroyed vehicle, thus maintaining the combat power of the convoy

Dismounted Overwatch



Action on the Landing Zone



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Fast Roping the ACSW

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ACSW Summary

- Provides New Weapon Capabilities
- Passed All ATD Exit Criteria
- Poised for the SDD Phase
- Driving towards Low Rate Initial Production

ACSW: Combat Weapon of the Future